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RELATIONSHIPS BETWEEN MORTALITY AND ASTROLOGICAL SIGN AT BIRTH

- *Something Whimsical for a Change* -

For the most part, health statistics are grim and depressing, for even those signalling progress and hope seem always counterbalanced by signs of new or unresolved strife. We have reported, for example, that North Carolina has made great strides in the area of infant mortality (1); yet we still find ourselves better than only three states (2). We have reported outstanding progress in the area of infectious diseases and malnutrition, showing that some diseases have been eradicated; and we simultaneously point to the emergence of new disease patterns for which we have no cure (3). Again, we examine mortality patterns across the state and allude to North Carolina's "healthy mountains"; but adverse mortality conditions in eastern counties are the focus of the analysis (4). Recently also, we have reported statistical associations between mortality and various everyday facts of life including marital status, socio-economic conditions and nutritional factors (5-7).

Is it any wonder then that health statisticians might occasionally require some light-hearted research! Such was the case when we sought to determine if births, homicides or suicides are more frequent during the full moon; they are not, according to North Carolina statistics for 1974 (8). Such is the case now as we seek to determine if time and manner of death are statistically associated with signs of the zodiac. Whimsical perhaps, and yet, according to those who know, vulnerability to various health conditions is part of one's horoscope (9).

METHODS AND MATERIALS

Deaths occurring during 1976 are the first for which the North Carolina statistical file includes date of birth. Hence, deaths used in this study are those occurring during 1976 to North Carolina residents, irrespective of place of death, and to nonresidents who died in North Carolina.

Due to the fact that dates of the zodiac signs are fluid and change with the motion of the Sun each year, and in the interest of achieving purity in mortality traits, we have eliminated decedents who were born at the edge, or cusp, of a sign. We also excluded infants (under 1 year of age) since prenatal and environmental factors are likely to influence these events to a decisive extent. Thus, this study includes a total of 31,980 decedents one year or older at death whose birthdates corresponded to the following 3-week intervals:

<u>Sign of the Zodiac*</u>	<u>Date of Birth</u>
Aries	March 26 - April 15
Taurus	April 25 - May 15
Gemini	May 26 - June 15
Cancer	June 26 - July 16
Leo	July 27 - August 16
Virgo	August 28 - September 17
Libra	September 27 - October 17
Scorpio	October 28 - November 17
Sagittarius	November 27 - December 17
Capricorn	December 26 - January 15
Aquarius	January 25 - February 14
Pisces	February 24 - March 16

In the absence of population bases to compute age-adjusted death rates, this study examines mean and median ages at death specific for race, sex and astrological sign. A nonparametric statistical procedure—the *median test*—is used to determine whether age differences among the zodiac signs are statistically significant (10). The test is applied to both the 31,980 decedents ages one and older and the 28,920 decedents over age forty since the experts suggest that the influence of the Sun may develop as life goes on and that the young could be influenced mainly by their Ascendent. The Ascendent is the sign rising on the eastern horizon at the very minute of birth (9).

For the decedent population ages one and older (cusp-born excluded), this study also examines causes of death and uses the chi-square criterion to test the hypothesis that causes of death are independent of Sun-sign at birth. Causes selected for analysis are those for which the frequency of the condition as an underlying cause is thought fairly representative of the incidence at death. This excludes diabetes and some other conditions which are very often considered "associated" rather than underlying causes.

Deaths coded to the following categories have been examined:

<u>Underlying Cause of Death</u>	<u>ICDA Codes (11)</u>
Cardiovascular Disease	390-458
Cancer of the Trachea, Bronchus and Lung	162
Cancer excluding Trachea, Bronchus and Lung	140-161, 163-209
Cirrhosis of the Liver	571
Motor Vehicle Accidents	810-823
Accidents excluding Motor Vehicles	800-807, 825-949
Suicide	950-959
Homicide	960-978

RESULTS

The table on the following page shows for four race-sex groups the numbers of decedents ages one and older born under each of the Sun-signs (cusp-born excluded). On the average, 90 percent of these decedents were over age forty.

*Sun-sign at birth, as featured in the mass media.

Number of Decedents One Year and Older Born Under Each Sun-sign
(Cusp-born Excluded)
North Carolina, 1976

<u>Sun-sign</u>	<u>Total</u>	<u>White Male</u>	<u>White Female</u>	<u>Nonwhite Male</u>	<u>Nonwhite Female</u>
Aries	2,819	1,174	903	417	325
Taurus	2,826	1,204	894	405	323
Gemini	2,722	1,161	893	388	280
Cancer	2,553	1,091	792	363	307
Leo	2,796	1,261	873	385	277
Virgo	2,907	1,247	975	384	301
Libra	2,882	1,268	940	387	287
Scorpio	2,438	1,127	833	282	196
Sagittarius	2,330	1,029	785	312	204
Capricorn	2,383	1,018	712	400	253
Aquarius	2,523	1,106	833	328	256
Pisces	2,801	1,171	797	473	360
Total	31,980	13,857	10,230	4,524	3,369

Ages at Death

The graphs on the next page show for each race-sex-zodiac group the mean age at death for decedents one year and older, the median age at death for decedents one year and older, and the median age at death for decedents over age 40. Statistically, differences in the ages associated with the twelve birth signs are not compelling, the largest occurring among nonwhite males.* These differences are mainly due to differences among younger (40 and under) rather than older decedents.

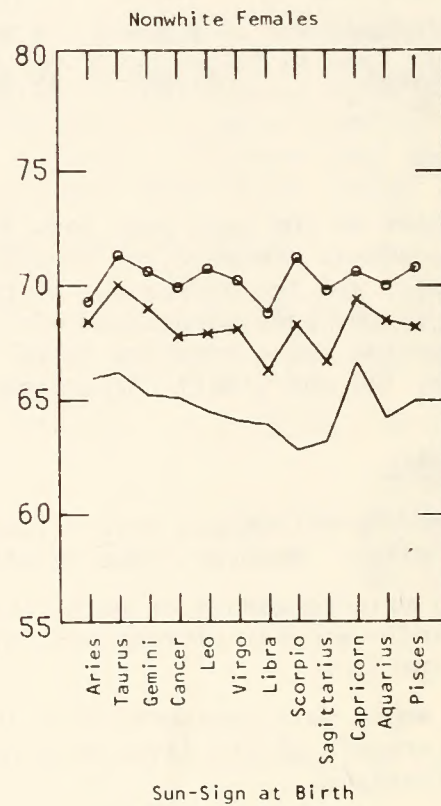
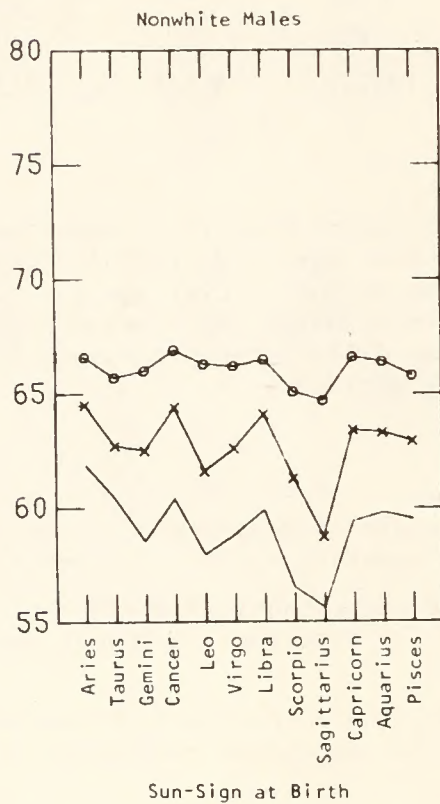
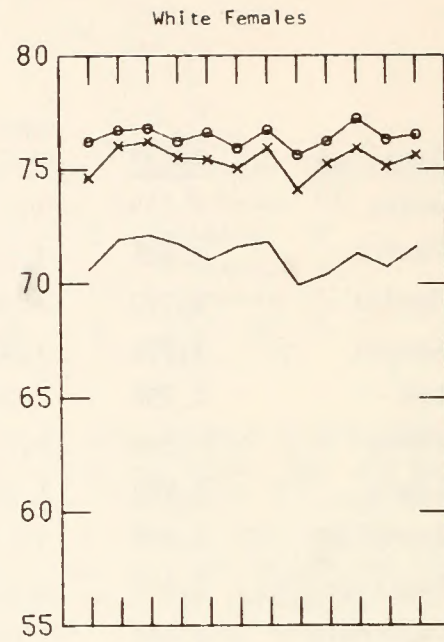
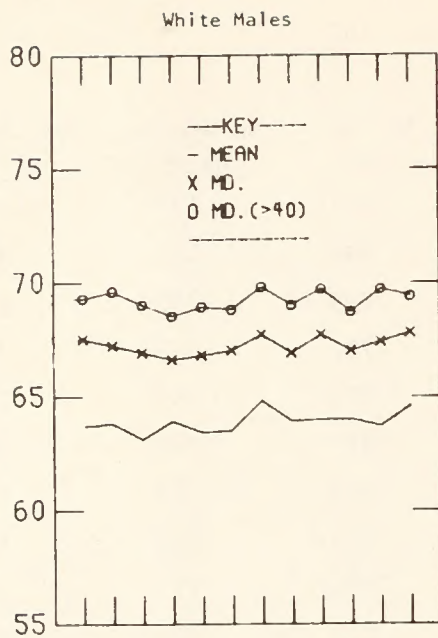
Causes of Death

Based on the chi-square test criterion, cause of death appears independent of the Sun-sign at birth. However, some results are consistent across race-sex groups:

- Among male decedents of both races, the percentages of deaths attributed to cardiovascular disease were highest for Pisceans and lowest for Sagittarians.
- Also among male decedents of both races, the percentages of deaths attributed to cirrhosis of the liver were highest for Scorpions and lowest for Sagittarians.

*Results of the median test applied to nonwhite males: $\chi^2 = 18.74$, $p = .07$.

AGES AT DEATH
NORTH CAROLINA 1976*



*Excluding cusp-born and infants.

- Among female decedents of both races, the percentages of deaths attributed to cardiovascular disease were least for Aquarians.
- Also among female decedents of both races, the percentages of deaths attributed to non-lung cancer were least for those born under the sign of Capricorn.
- Among nonwhite decedents of both sexes, the percentages of deaths due to non-motor-vehicle accidents were highest for those born under Cancer.
- Among white female and nonwhite male decedents, suicides were most prevalent under the birth sign of Aquarius.
- Among white male and nonwhite female decedents, suicides were least prevalent under the birth sign of Taurus.
- Except for nonwhite females, decedents born under Gemini experienced the lowest incidence of lung cancer.
- Except for white males, decedents born under Leo experienced the highest incidence of death by homicide.

CONCLUSION

Readers are invited to draw their own conclusions concerning the influence of the Sun-sign at birth upon health status. For our part, we believe the evidence suggests that (i) healthwise, there is no basis for the hypothesis that the influence of the Sun is greater in later life and (ii) healthwise, Sun-sign astrology does not appear predictive. At the same time, we acknowledge that we haven't the data to examine claims that one's true horoscope involves not only signs but also "aspects" which are the angular relationships among the planets at the exact time (within a few hours) and place of birth. Thus, the present study may not in any way assess the worth of *real* astrology. But for that matter, considering the familiar axiom, "The stars impel, they do not compel," we would not even suggest that Sun-sign astrology isn't real, only that—from a health point of view—heredity, environment and/or some untested astrological influence appear more decisive.

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